

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: RUNG FU DUO

For: AUTOMATED MAGNETIC SORTER

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ABSTRACT

A device for concentrating cells of interest from a fluid sample comprises an array of electromagnets associated with an array of holders for containers of the fluid samples, said electromagnets controlled by a microprocessor to generate controllable magnetic fields. Magnetic beads having an affinity for certain of the cells in the fluid sample are added to the fluid sample. When the microprocessor applies electrical current to the electrical magnet(s), the cells linked with magnetic beads will be attracted to the tube wall. Liquid aspirated from the sample will contain comparatively few of the cells for which the magnetic beads have an affinity, thereby allowing concentration of cells of interest. Optionally, aspiration may be accomplished using a robotic pipette system.